Walk Behind Lawn Mower

Owner/Operator Manual
Manuel du Propriétaire/Utilisateur

Models
911150 – BR21P
911152 – BR21SP
911156 – BR21SPE

GB ENGLISH

F FRENCH

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TABLE OF CONTENTS

Safety 4
Assembly 9
Controls and Features 11
Operation 12
Maintenance 16
Service and Adjustments 19
Storage 22
Troubleshooting 23
Service Parts 24
Accessories 24
Specifications 25
Warranty 26

INTRODUCTION

NON-ENGLISH MANUALS

Manuals in languages other than English may be obtained from your Dealer. Visit your dealer or www.ariens.com for a list of languages available for your equipment.

Manuals printed in languages other than English are also available as a free download on our website:

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Puede obtener manuales en idiomas diferentes del inglés en su distribuidor. Visite a su distribuidor o vaya a www.ariens.com para obtener una lista de idiomas disponibles para su equipo.

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Les manuels imprimés dans des langues différentes de l'anglais sont également disponibles en téléchargement gratuit sur notre site Web :

http://www.ariens.com

THE MANUAL

Before using the unit, carefully and completely read your manuals. The contents will give you an understanding of safety instructions and controls during normal operation and maintenance.

All reference to left, right, front, or rear are given from the operator's position, facing the direction of forward travel.

SERVICE AND REPLACEMENT PARTS

When ordering replacement parts or making service inquiries, know the Model and Serial numbers of your unit and engine.

Numbers are located on the product registration form in the unit literature package. They are also printed on a serial number label, located on the frame of your unit (Figure 1).

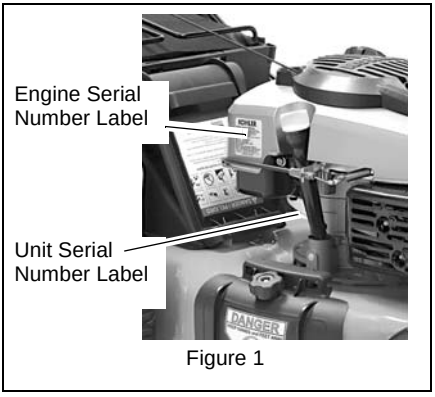


Figure 1

 © Copyright 2008 Ariens Company

• Record Unit Model and Serial numbers here:

• Record Engine Model & Serial numbers here:

PRODUCT REGISTRATION

The Ariens dealer must register the product at the time of purchase. Registering the product will help the company process warranty claims or contact you with the latest service information. All claims meeting requirements during the limited warranty period will be honored, whether or not the product registration card is returned. Keep a proof of purchase if you do not register your unit.

Customer Note: If the Dealer does not register your product, please fill out, sign and return the product registration card to Ariens or go to www.ariens.com on the internet.

UNAUTHORIZED REPLACEMENT PARTS

Use only Ariens replacement parts. Replacing any part on this vehicle with anything other than an Ariens authorized replacement part may adversely affect the performance, durability, or safety of this unit and may void the warranty. Ariens disclaims liability for any claims or damages, whether warranty, property damage, personal injury or death arising out of the use of unauthorized replacement parts. To locate your nearest Ariens Dealer, go to www.ariens.com on the internet.

DEALER DELIVERY

Dealer should:

1. Check that all assembly and adjustments have been properly completed.
2. Fill out Original Purchaser Registration Card and return the card to Ariens.
3. Explain Ariens Limited Warranty Policy.
4. Explain recommended lubrication and maintenance. Advise customer on adjustments. Remind customer to change oil in 4 cycle engine crankcase after first five (5) hours of operation.
5. Instruct customer on controls and operation of unit. Discuss and emphasize the Safety Rules. Give customer Owner/Operator, Parts, and Engine manuals. Advise customer to thoroughly read and understand them.

DISCLAIMER

Ariens reserves the right to discontinue, make changes to, and add improvements upon its products at any time without public notice or obligation.The descriptions and specifications contained in this manual were in effect at printing. Equipment described within this manual may be optional. Some illustrations may not apply to your unit.

SAFETY

WARNING: This cutting machine is capable of amputating hands and feet and throwing objects. Failure to observe the safety instructions in the manuals and on decals could result in serious injury or death.

Slopes are a major factor related to slip and fall accidents. Operation on all slopes requires extra caution.

Tragic accidents can occur if the operator is not alert to the presence of children. Never assume that children will remain where you last saw them.

Gasoline is extremely flammable and the vapors are explosive, handle with care.

Stop unit and engine, remove key (if equipped) and allow moving parts to stop before leaving operator's position.

SAFETY ALERTS

Look for these symbols to point out important safety precautions. They mean:

Attention!

Personal Safety Is Involved!

Become Alert!

Obey The Message!

The safety alert symbols above and signal words below are used on decals and in this manual.

Read and understand all safety messages.

DANGER: IMMINENTLY HAZARDOUS SITUATION! If not avoided, WILL RESULT in death or serious injury.

WARNING: POTENTIALLY HAZARDOUS SITUATION! If not avoided, COULD RESULT in death or serious injury.

CAUTION: POTENTIALLY HAZARDOUS SITUATION! If not avoided, MAY RESULT in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTATIONS

NOTE: General reference information for proper operation and maintenance practices.

IMPORTANT: Specific procedures or information required to prevent damage to unit or attachment.

PRACTICES AND LAWS

Practice usual and customary safe working precautions, for the benefit of yourself and others. Understand and follow all safety messages. Be alert to unsafe conditions and the possibility of minor, moderate, or serious injury or death. Learn applicable rules and laws in your area.

REQUIRED OPERATOR TRAINING

Original purchaser of this unit was instructed by the seller on safe and proper operation. If anyone other than the original purchaser will use the unit, ALWAYS provide this manual and any needed safety training before operation.

SAFETY DECALS AND LOCATIONS

ALWAYS replace missing or damaged safety decals. Refer to Figure 2 for safety decal locations.

1
CAUTION
• BAG IS SUBJECT TO WEAR AND DETERIORATION.
• CHECK BAG FREQUENTLY, REPLACE WHEN NECESSARY.
• USE ORIGINAL BEG TO COMPLY WITH SAFETY SPECIFICATIONS.
PRECAUCION
• LA BOLSA ESTA SUJETA A DESGASTEY DETERORO.
• REVISAR LA BOLSA FRECUETAMENTE, Y REEPLAZARLA SI ES NECESARIO.
• USAR BOLSAS ORIGINAL PARA CUMPLIR CON LAS ESPECIFICACIONES DE SEGURIDAD.
ATTENTION
• LE SAC EST SOUMIS À L'USURE ET 'A LÀ DÉTÉRIORATION.
• VERIFIER LE SAC FRÉQUEMMENT, LE REMPLACER AU BESOIN.
• UTILISER UN BAC D'ORIGINE CONFORME AUX NORME DE SECURITE.
77394
DANGER / PELIGRO
MEETS C.P.S.C. BLADE SAFETY REQUIREMENTS
3
DANGER
KEEP HANDS and FEET AWAY
2
OM0813

Figure 2

1. DANGER!

TO AVOID SERIOUS INJURY OR DEATH

OL1801

Read the operator's manual.

OL4370

Keep children and others away from unit while operating.

OL0910

Never direct discharge toward other people. Thrown objects can cause injury.

OL4540

Do not operate mower unless guards are in operating position or entire bagger is attached.

OL3030

Keep safety devices (guards, shields, switches, etc.) in place and working.

OL4545

Do not allow operation of machine by untrained personnel.

OL4550

Go across slopes, not up and down.

OL4560

Do not park on a slope unless chocked or blocked.

OL4565

Look down and behind before and while moving backward.

2. DANGER!

KEEP HANDS AND FEET AWAY

Do not operate mower unless guards are in operating position or bagger is attached.

3. CAUTION!

- Bag is subject to wear and deterioration.
- Check bag frequently, replace when necessary.
- Use original bag to comply with safety specifications.

SAFETY RULES

If unit is to be used by someone other than original purchaser; loaned, rented or sold, ALWAYS provide this manual and any needed safety training before operation.

Learn applicable rules and laws in your area, including those that may restrict the age of the operator.

Read, understand and follow all safety practices in Owner/Operator Manual before beginning assembly. Failure to follow instructions could result in personal injury and/or damage to unit.

If the operator or the mechanic cannot read the manual, it is the owner's responsibility to explain it to them. Only the user can prevent and is responsible for accidents or injuries occurring to themselves, other people or property.

ALWAYS remove key (if equipped) and disconnect wire from spark plug before assembly. Unintentional engine start up can cause death or serious injury.

Complete a walk around inspection of unit and work area to understand:

- work area
- your unit
- all safety decals.

Clear work area of stones, sticks, wire and foreign objects which might be picked up and thrown. Tall grass can hide obstacles.

Know the work area. Stay alert for holes, rocks, rough terrain and hidden hazards.

Keep away from drop-offs, ditches, or embankments that could cause operator to lose footing or control of unit.

ALWAYS be aware of traffic when operating along streets or curbs.

Keep work area clear of all persons, children and pets.

Keep children out of the work area and under the watchful care of a responsible adult.

ALWAYS operate unit when there is good visibility and light.

DO NOT mow wet grass.

ALWAYS be sure of your footing. Keep a firm hold on handlebar. Walk, NEVER run.

Engine/blade control feature on mower stops engine and blade within 3 seconds whenever operator releases handlebar. Check this feature frequently. If feature fails to operate, disconnect spark plug wire and adjust or have it repaired before using unit.

Only trained adults may operate or service unit. Training includes actual operation. The owner is responsible for training users.

NEVER operate after or during the use of medication, drugs or alcohol. Unit requires complete and unimpaired attention.

NEVER allow children to use or service mower.

ALWAYS keep hands and feet away from rotating parts. Rotating parts can cut off body parts.

ALWAYS keep hands away from pinch points.

Fumes from engine exhaust can cause death or serious injury. DO NOT run engine in an enclosed area.

ALWAYS protect eyes, face, and body with adequate safety gear and protective clothes. Wear sturdy footwear, gloves, a hard hat and safety goggles or safety glasses with side shields while operating mower.

Wear appropriate hearing protection.

NEVER operate mower barefoot or when wearing open sandals or canvas shoes.

NEVER wear loose clothes, long hair or jewelry that may get caught in rotating parts.

ALWAYS stand clear of discharge when operating unit.

NEVER direct discharge toward bystanders.

Operator is responsible for bystander safety.

DO NOT touch hot parts. Allow parts to cool.

Keep safety devices or guards in place and functioning properly. NEVER modify or remove safety devices.

Read, understand, and follow all instructions in the manual and on the machine before starting. Understand:

- How to operate all controls
- The functions of all controls
- How to STOP in an emergency.

DO NOT attempt to start your engine until you know what the controls do and how they work.

DO NOT tilt mower when starting it.

Keep feet away when starting engine.

DO NOT start the engine or operate mower without side discharge cover or side discharge deflector installed.

Never leave a running unit unattended.

Take all possible precautions when leaving unit unattended.

ALWAYS shut off engine, remove key (electric start models) and disconnect spark plug wire to prevent accidental starting or unauthorized use.

Stop engine if anyone enters the work area.

NEVER attempt to make any adjustments to unit while engine is running (except where specifically recommended). Stop engine, remove key (electric start models) and wait for all moving parts to stop before servicing.

DO NOT make cutting height wheel adjustments while the engine is running.

If you strike an object, or if equipment vibrates abnormally, stop engine at once, wait for moving parts to stop and disconnect wire from spark plug. Repair any damage before restarting unit.

Keep rear door closed when engine is running unless the grass bag is in place.

Stop engine before removing and emptying grass bag.

When mulching or bagging, ALWAYS install discharge cover.

When side discharging, ALWAYS install side discharge deflector.

ALWAYS shut off engine, allow blade to stop and disconnect spark plug wire before clearing clogs or cleaning unit.

Check grass bag for wear, damage, and/or deterioration. Replace only with Ariens original equipment replacement parts for safety.

To reduce fire hazard and overheating, keep equipment free of grass, leaves, debris or excessive lubricants.

Use extra care when approaching blind corners, shrubs, trees, or other objects which may obscure vision.

DO NOT mow at too fast a rate. DO NOT change engine governor setting or over-speed the engine.

Do not operate mower on gravel or loose material such as sand. Stop mower when crossing drives, walks, or roads to prevent damage or injury from thrown objects.

DO NOT pull mower backwards unless absolutely necessary. Look down and back, especially for small children, before and while moving backwards.

On self-propelled models, releasing wheel drive control must stop mower's forward movement. If this feature fails to operate, disconnect spark plug wire and repair before using unit.

On self-propelled models, wheel drive must be disengaged when starting engine.

DO NOT operate on steep slopes.

NEVER leave unit unattended on a slope. Chock wheels if parking on a slope.

Mow across the face of slopes, never up and down. Be especially cautious when changing direction on slopes.

This product is equipped with an internal combustion engine. DO NOT use on or near any unimproved, forest or brush covered land unless the exhaust system is equipped with a spark arrestor meeting applicable local, state or federal laws. A spark arrestor, if used, must be maintained in effective working order by the operator. See your Ariens Dealer or engine manufacturer's service center.

Emission Control System Certification Label

NOTE: Tampering with emission controls and components by unauthorized personnel may result in severe fines or penalties. Emission controls and components can only be adjusted by EPA and/or CARB authorized service centers. Contact your Ariens Equipment Retailer concerning emission controls and component questions.

Fuel is highly flammable and its vapors can explode. ONLY use approved fuel containers.

- NO Smoking!
- NO Sparks!
- NO Flames!
- Allow engine to cool before filling fuel tank.

Never fill containers inside a vehicle or on a truck or trailer bed with a plastic liner. Always place containers on the ground away from your vehicle before filling.

When practical, remove gas-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such equipment on a trailer with a portable container, rather than from a gasoline dispenser nozzle.

Keep the nozzle in contact with the rim of the fuel tank or container opening at all times until fueling is complete. Do not use a nozzle lock-open device.

Check fuel supply before starting engine.

DO NOT fill gasoline tank indoors, when engine is running, or while engine is hot.

Allow engine to cool several minutes before removing fuel cap.

DO NOT overfill. Allow about 1/4" (6 mm) of tank space for fuel expansion.

Replace gasoline tank cap securely and clean any spilled fuel before starting engine.

If fuel is spilled on clothing, change clothing immediately.

NEVER store fuel inside where there is an open flame, such as a water heater.

ALWAYS drain fuel outdoors away from ignition sources.

ALWAYS shut off engine , and remove key, and close fuel shutoff valve when transporting unit on a truck or trailer.

Avoid Electric Shock. DO NOT disconnect wire from spark plug while engine is running.

Do NOT put battery in fire or mutilate.

Explosive Gases!

NO flames, NO sparks, NO smoking, near battery.

Poisonous battery fluid contains sulfuric acid. Contact with skin, eyes or clothing can cause severe chemical burns.

ALWAYS wear safety glasses and protective gear near battery.

ALWAYS keep batteries out of reach of children.

Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

Charge batteries in an open, well-ventilated area, away from spark and flames. Unplug charger before connecting or disconnecting battery. Wear protective clothing and use insulated tools.

Accidental engine start up can cause death or serious injury. Except where specifically recommended, ALWAYS stop engine, remove key (electric start models), wait for moving parts to stop, allow parts to cool and disconnect spark plug wire before inspecting, servicing, adjusting or repairing unit.

Keep mower free of grass, leaves, or other debris build-up.

Keep equipment in good condition.

Maintain or replace safety and instruction labels, as necessary.

Follow engine manufacturer's safety instruction when servicing engine.

Check all hardware at regular intervals, especially blade attachment bolts. Keep all hardware properly tightened.

An extension spring, when extended, stores energy and can be dangerous. Always use tools specifically designed for installing or removing an extension spring. Always compress or extend springs slowly.

Before tipping unit, remove fuel and battery (if equipped).

Use extra care when loading or unloading unit onto trailer or truck.

Ensure all wheel blocks, jack stands and tie downs will support unit during maintenance.

Replace worn-out mufflers immediately. Continued use could result in fire or explosion.

Sharp edges can cut or amputate fingers or a hand. Wrap blade or wear sturdy gloves to service.

Only replace blades. NEVER straighten or weld blades.

Use only replacement parts designed for your unit. See your Ariens Dealer.

Allow engine to cool before storing in any enclosure.

ALWAYS clean unit before extended storage. See engine manual for proper storage.

DO NOT store unit inside a building with fuel in the fuel tank where any ignition sources are present.

Use only accessories which have been approved by Ariens and are properly installed.

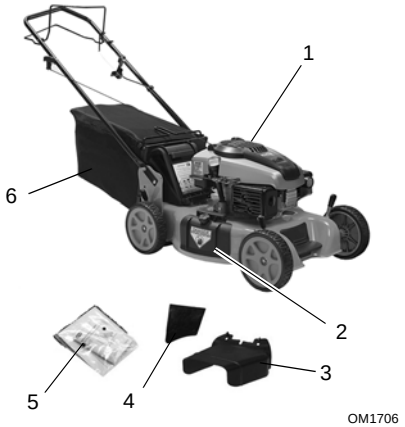
Use only accessories or attachments that are designed for your unit and that can be used safely on your terrain.

Check attachments frequently and replace worn or damaged components with manufacturer's recommended parts.

ASSEMBLY

CAUTION: AVOID INJURY. Read and understand the entire *Safety* section before proceeding.

CARTON CONTENTS



1. Mower Unit
2. Mulch Cover
3. Side Discharge Chute
4. Mulch Plug
5. Literature Pack
6. Grass Bag

Figure 3

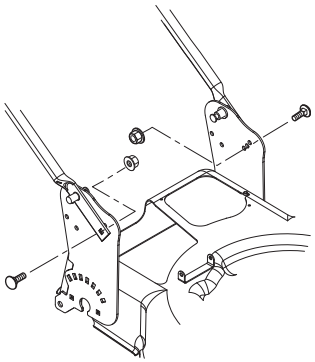
ASSEMBLY

1. Remove mower and handlebar from carton.
2. Install the handlebars on the pivot pins attached to the handlebar uprights.

NOTE: Make sure the cables (connected to the handlebar) are on the left side of the unit.

3. Remove the handlebar mounting hardware from the handlebar uprights.
4. Rotate the handlebar up or down to the desired height and align the mounting holes with the holes in the handlebar upright.
5. Secure the handlebars in position with hardware removed in step 3.

911150, 152



911156

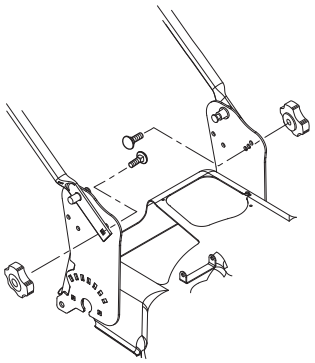


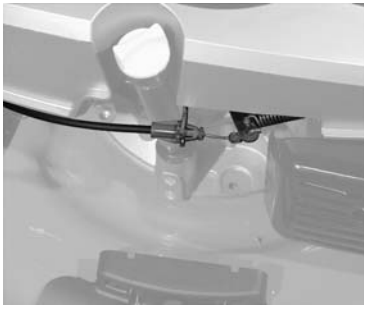
Figure 4

6. Connect the engine/blade control cable to the engine.

   Route the z-bend cable end into engine shutoff lever as shown below.

   Insert the cable connector into the cable mounting bracket on the engine. Make sure the connector snaps into place securely.
7. Check engine oil level and add if necessary. See engine manual.

911150, 152



911156

Figure 5

8. Set-up mower for bagging, side discharge or mulching. See *MOWER SET-UP* on page 14.

NOTE: Bagging is not standard on push models. See *ACCESSORIES* on page 24 for kit part numbers.

9. Fill fuel tank. See *FILLING THE FUEL TANK* on page 13.
10. Connect the battery. See *BATTERY (electric start models)* on page 21.
11. Connect spark plug wire.
12. Check the engine/blade control feature. Try starting the engine *without* the engine/blade control held against the handlebar. Engine must not start. If engine starts, stop engine and bring the unit to your dealer for adjustment or repair.

CONTROLS AND FEATURES

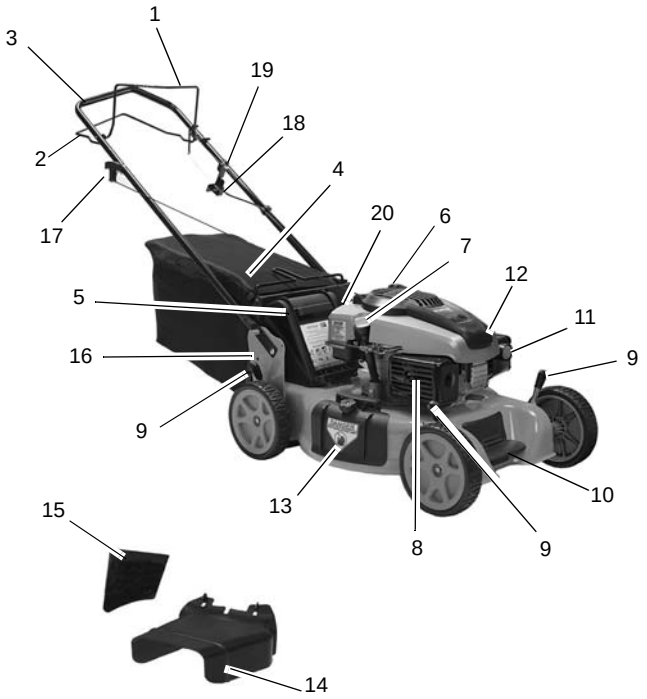


Figure 6

OM1866

1. Engine/Blade Control
2. Wheel Drive Control (911152, 156)
3. Handlebars
4. Grass Bag (911152, 156)
5. Rear Door
6. Fuel Tank and Cap
7. Oil Fill/Dipstick
8. Muffler and Muffler Guard
9. Cutting Height Levers (2 Rear Wheel Adjusters, 2 Front Wheel Adjusters)
10. Lift Handle
11. Primer Bulb
12. Air Filter
13. Mulch Cover
14. Side Discharge Chute
15. Mulch Plug
16. Handlebar Adjustment Holes
17. Recoil Starter Handle
18. Speed Limiter
19. Ignition Switch (911156)
20. Battery (911156)

OPERATION

CONTROLS AND FEATURES

See Figure 6 for locations.

WARNING: Improper operation can lead to injury. Learn what the controls do and how they work. Thoroughly read and understand entire Operator Manual.

CAUTION: AVOID INJURY. Read and understand the entire *Safety* section before proceeding.

Engine/Blade Control

CAUTION: Check function of Engine/Blade Control regularly. Improper function of control could cause injury.

The engine/blade control must be held against the handlebar to start the engine and blade.

Engine/blade control feature on mower stops engine and blade within 3 seconds whenever operator releases handlebar. Check this feature frequently. If feature fails to operate, disconnect spark plug wire and adjust or have it repaired before using unit.

Handlebar

Adjust handlebar to a safe and comfortable height. See *HANDLEBAR HEIGHT* on page 19.

Recoil Starter Handle

When pulled, handle will turn engine over.

CUTTING HEIGHT ADJUSTMENT

DANGER: Avoid injury from rotating blade.
ALWAYS shut off engine before adjusting cutting height.

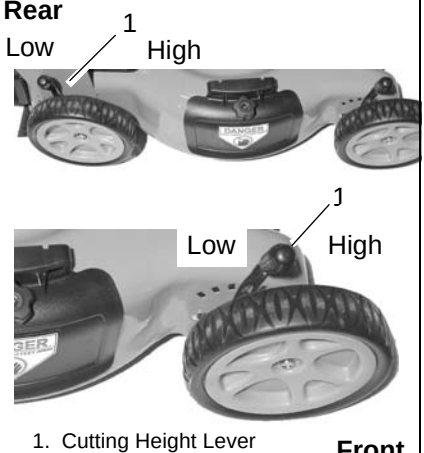
CAUTION: On self-propelled models, both rear wheels must be set at same height or traction drive may not work properly.

Cutting Height Settings Chart	
Notch	Cut grass length
1	1" (25 mm)
2	1-1/4" (32 mm)
3	1-1/2" (38 mm)
4	2-1/4" (57 mm)
5	2-3/4" (70 mm)
6	3-1/2" (89 mm)
7	4" (102 mm)

Standard Models

To change cutting height, move cutting height levers one notch at a time on each wheel to set desired height (Figure 7).

NOTE: Each wheel on mower must be set at the same height for a level cut.



1. Cutting Height Lever

Figure 7

OPTIONAL CONTROLS

Primer Bulb

Push the primer bulb in to add fuel for easier engine start.

Wheel Drive Control (self-propelled models) (911152, 156)

> **CAUTION:** Unit will move forward at engine start if wheel drive control is engaged. ALWAYS release wheel drive control before starting unit.

NOTE: Engine must be running for wheel drive to propel unit.

To drive forward:

Slowly squeeze the wheel drive control toward the handlebar until you reach a comfortable ground speed. Hold the wheel drive control against the handlebar for full speed.

To stop:

Release wheel drive control.

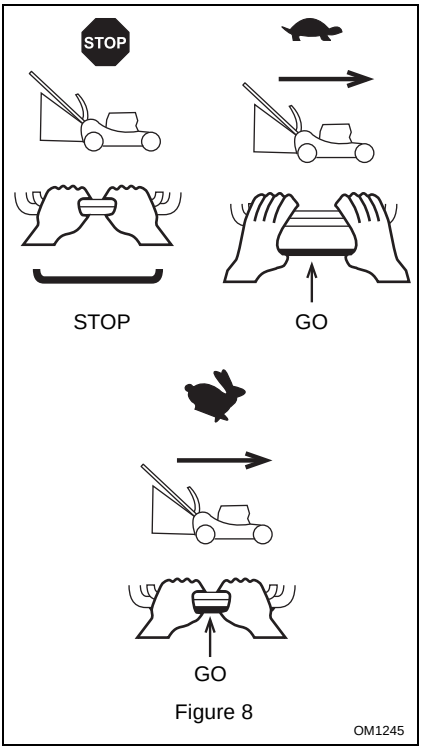


Figure 8

OM1245

Speed Limiter (911152, 156)

The speed limiter increases or decreases tension in the drive cable, which limits the unit's forward speed.

In the operator's position, turn the speed limiter to the left to increase maximum forward speed. Turn the speed limiter to the right to decrease maximum forward speed.

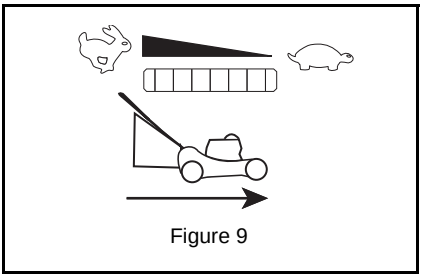


Figure 9

Ignition Switch (911156)

A removable key operates the ignition switch. Turn the key to the start position (2) to start the unit. The key will spring back to the "RUN" position.

RUN Position (1): All controls are operable.

START Position (2): Starter turns over the engine.

FILLING THE FUEL TANK

To add fuel to fuel tank:

1. Put unit in open or well-ventilated area.
2. Stop engine and allow to cool.
3. Clean fuel cap and surrounding area.
4. Remove cap.

IMPORTANT: See engine manual for correct type and grade of fuel.

5. Fill fuel tank to within 1/4 in. (0.63 cm) below bottom of filler neck with unleaded gasoline. See *SPECIFICATIONS* on page 25.
6. Replace fuel cap and tighten.
7. ALWAYS clean any spilled fuel.

MOWER SET-UP

CAUTION: DO NOT operate mower unless either side discharge cover or side discharge deflector is installed. Thrown objects may cause damage or injury. Never operate unit with rear door open unless grass bag is in place.

CAUTION: If clog or obstruction prevents grass flow, release engine/blade control and disconnect spark plug wire before attempting to clear away any clogs.

To Bag (Optional on Push Models)

CAUTION: Check grass bag frequently for wear or deterioration. Replace worn or damaged bag with Ariens original equipment replacement bag only.

See Figure 10.

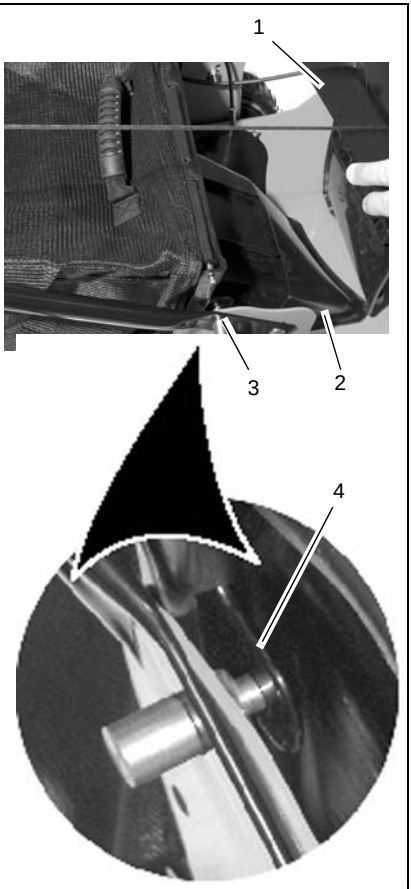
1. Shut off unit.
2. Make sure mulch cover is closed and secured with knob.
3. Lift rear door and remove mulch plug, if necessary.
4. Seat bagger chute inside deck opening and on top of deck.
5. Hook grass bag frame on mounting pins.
6. Lower rear door.

There should be no openings between bagger chute and mounting surface after installing bag. If necessary, clear debris from bag mounting surfaces.

Grass Bag Removal

1. Shut off unit.
2. Lift rear door.
3. Use handle to lift bag off mounting pins.
4. Close rear door.

NOTE: Empty grass bag and clean mower pan after each use. DO NOT allow grass clumps or a grass coating to collect inside of grass bag or mower pan. Remove grass bag from mower, wash bag with hose and allow to dry.



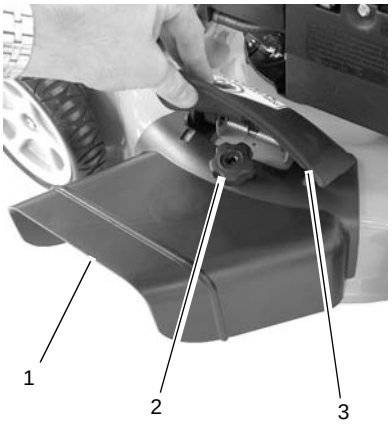
1. Rear Door
2. Bagger Chute
3. Mounting Pin
4. Grass Bag Frame

Figure 10

To Side Discharge

See Figure 11.

1. Shut off unit.
2. Remove grass bag.
3. Lift rear door and install mulch plug (see below).
4. Remove the knob from and then hold open the mulch cover.
5. Install the side discharge chute on stud on the mower. Make sure chute covers discharge opening.
6. Secure the chute with the knob removed in step 4 and then close the mulch cover.



1. Side Discharge Chute
2. Knob
3. Mulch Cover

Figure 11

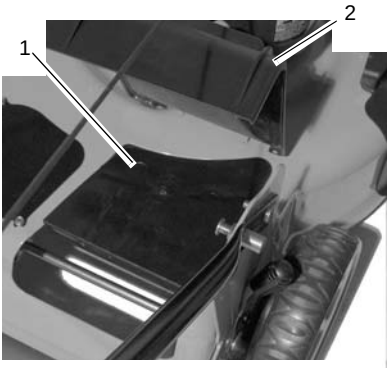
To Mulch

See Figure 12.

1. Shut off unit.
2. Remove grass bag and side discharge chute, if installed.
3. Make sure mulch cover is closed and secured with knob.
4. Lift rear door and insert mulch plug with the beveled face to the left.

   There should be no openings between mulch plug and mounting surface of the deck.
5. Close rear door.

NOTE: Rear door must close flush.



1. Mulch Plug
2. Rear Door

Figure 12

EMERGENCY STOPPING

To stop the mower in an emergency:

1. Release the engine/blade control.
2. Release the wheel drive control (self-propelled models).
3. Allow all moving parts to stop before leaving operator's position.

STARTING AND SHUT OFF

WARNING: Improper operation can lead to injury. Learn what the controls do and how they work. Thoroughly read and understand entire Operator Manual.

See Figure 6 on page 11 for all Controls and Features.

NOTE: Start engine on a level surface that is free of debris.

Manual Start

1. Check each item in the Before Each Use section of the *MAINTENANCE SCHEDULE* on page 16.
2. For engines with a primer, push primer bulb 2 or 3 times for a cold engine.

NOTE: It is unnecessary to prime or choke a warm engine.

3. For engines with a throttle, place throttle control in the choke position. Once the engine has started, place throttle in the high speed detent.
4. With engine/blade control held against the handlebar, grasp starter handle and pull rope slowly until it pulls harder. This is the compression stroke. Let rope rewind slowly.
5. Pull rope with rapid continuous full arm stroke to start engine. Allow rope to rewind slowly.

IMPORTANT: DO NOT let starter handle snap against bracket.

6. Repeat steps 4 and 6 until engine starts. (If engine does not start, see *TROUBLESHOOTING* on page 23.)

Electric Start (911156)

Recoil may also be used to start the engine (see *Manual Start* on page 15).

IMPORTANT: DO NOT start engine while the charger is connected to wiring harness.

1. Check each item in the Before Each Use section of the *MAINTENANCE SCHEDULE* on page 16.
2. For engines with a primer, push primer bulb 2 or 3 times for a cold engine.

NOTE: It is unnecessary to prime or choke a warm engine.

3. With engine/blade control held against the handlebar, turn the key to “Start” position to crank engine and release key when engine starts.

IMPORTANT: Do not run starter continuously for more than fifteen seconds. If the engine does not start after several attempts, refer to *TROUBLESHOOTING* on page 23.

Shut Off

1. Release wheel drive control and allow unit to stop completely (self-propelled models).
2. Release engine/blade control.
3. Turn key to off position and then remove key (electric start models).

Mowing Tips

Cut grass when it is dry.

Keep mower blades sharp.

Do not set cutting height too low. For tall grass, mow twice.

Do not mow too fast.

Mow with engine at full throttle. Discharge clippings into areas already cut.

Vary cutting pattern with each mowing.

NOTE: To prevent dirt and grass from collecting on mower pan, avoid operating over bare ground with only patches of grass.

Mulching Tips

For best mulching performance, cut no more than 1 inch (2.54 cm) of grass per cutting.

MAINTENANCE

CAUTION: AVOID INJURY. Read and understand the entire *Safety* section before proceeding.

Ariens Dealers will provide any service, parts or adjustments which may be required to keep your unit operating at peak efficiency. Should engine require service, contact an Ariens Dealer or an authorized engine manufacturer's service center.

MAINTENANCE SCHEDULE

NOTE: Some working conditions (heavy loads, high ambient temperatures, dusty conditions, or airborne debris) may require more frequent service.

See engine manual for further maintenance and troubleshooting information.

MAINTENANCE SCHEDULE

Service Performed	Before Each Use	25 ⏳	100 ⏳
Check Engine/Blade Control	•		
Check Wheel Drive Control	•		
Check Grass Bag	•		
Clean Unit	•		
Check Engine Oil	•		
Check Mower Blade	•		
Check Drive Belt	•		
Check Fasteners	•		
Check Air Cleaner		•	
Change Engine Oil		•*	
General Lubrication		•	
Check Spark Plug			•
Check Engine Cooling			•
Check Muffler			•

* After first 5 Hours of operation.

CHECK ENGINE/BLADE CONTROL

The engine and blade must stop within 3 seconds after releasing the control. If the engine and blade continue to run, adjust or repair control immediately.

CHECK WHEEL DRIVE CONTROL (self-propelled models)

The unit must stop quickly and completely when the control is released. Adjust or repair if necessary. See *WHEEL DRIVE CONTROL ADJUSTMENT (self-propelled models)* on page 22.

CHECK GRASS BAG (if equipped)

Check grass bag frequently for wear or deterioration. Replace worn or damaged bag with Ariens original equipment replacement bag only.

CLEAN UNIT

Before each use clean unit, muffler and engine surfaces of debris, oil or fuel spills to ensure proper cooling and prevent fires.

CHECK ENGINE OIL

IMPORTANT: Maintain proper oil level at all times or engine damage will result.

Check the level of the engine crankcase oil before each use.

Make sure engine is level when checking oil. See engine manual for instructions.

CHECK MOWER BLADE

See Figure 13 on page 17.

Check blade mounting: blade must be secure and bolt torqued to 37.5 - 50 lbf-ft (51-68 N•m) (bolt should fully compress lock washer).

Check blade for nicks and dull cutting edges. Sharpen if necessary.

Check blade for rounded or broken ends, thinned metal or other damage. Replace if necessary.

NOTE: Blades should be sharpened and balanced professionally. Contact your Ariens Dealer.

To remove blade:

1. Stop engine, wait for all moving parts to stop, and disconnect spark plug wire.
2. Block blade to prevent rotation.
3. Remove bolt, lock washer, flat washer and blade from shaft.

To install blade:

1. Replace blade, flat washer, lock washer and bolt on shaft.
2. Torque bolt to 37.5 - 50 lbf-ft (51-68 N•m) (bolt should fully compress lock washer).
3. Connect spark plug wire.

Sharpen the Mower Blades

CAUTION: DO NOT sharpen mower blades while on unit. An imbalanced mower blade will cause excessive vibration and eventual damage to unit. Check mower blade balance before reinstalling blades.

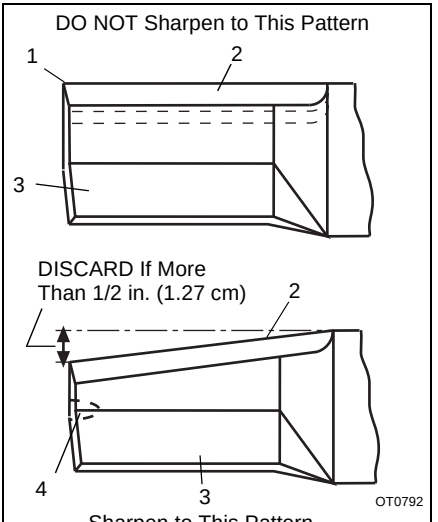
NEVER weld or straighten bent blades.

1. Remove mower blade from unit.

Discard mower blade if:

- More than 1/2 in. (1.27 cm) of metal is removed.
- Air lifts become eroded.
- Blade is bent or broken.

2. Sharpen mower blade by removing an equal amount of material from each end of mower blade. DO NOT change angle of cutting edge or round the corner of the mower blade.



Sharpen to This Pattern

1. Square Corner
2. Cutting Edge
3. Air Lift
4. Air Lift Erosion

Figure 13

3. Check mower blade balance.
   Slide mower blade on an unthreaded bolt. A balanced blade should remain in a horizontal position. If either end of mower blade moves downward, sharpen the heavy end until blade is balanced (Figure 14).
4. Install mower blade on unit.
5. Tighten the bolts to a torque of 37.5 - 50 lbf-ft (51-68 N•m).

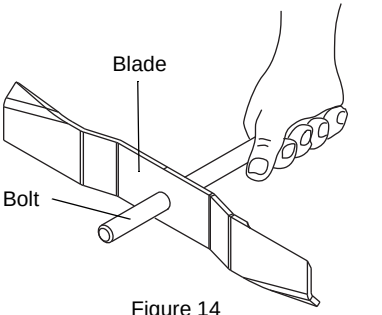


Figure 14

CHECK DRIVE BELT (self-propelled models)

Check drive belt and replace if worn or damaged. See *DRIVE BELT REPLACEMENT (self-propelled models)* on page 19.

CHECK FASTENERS

Check all fasteners for proper tightness. Pay special attention to blade hardware and all guards, shields and safety devices.

CHECK AIR CLEANER

See engine manual for specific information.

CHANGE ENGINE OIL

IMPORTANT: Change engine crankcase oil after first five (5) hours of operation. Then change oil after every 25 hours of operation.

Refer to engine manual for instructions and proper oil type.

IMPORTANT: Proper oil level must be maintained at all times or engine damage will result. DO NOT overfill. Be sure engine is level when adding oil.

GENERAL LUBRICATION

NOTE: The mower transmission is lubricated and sealed at the factory. It should need no routine lubrication. If the transmission leaks grease, bring the mower to your local Ariens dealer for repair.

CHECK SPARK PLUG

Spark plug should be replaced every 100 hours of operation or each year.

NOTE: Loose spark plug wire terminals can cause sparking. Replace terminal if damaged.

CHECK ENGINE COOLING

WARNING: HOT SURFACES can cause death or serious injury. DO NOT TOUCH parts which are hot from operation. ALWAYS allow parts to cool.

To prevent overheating, air must circulate freely around the cooling fins, cylinder head and block.

Every 100 hours of operation or yearly (more often if conditions require) remove blower housing and clean cooling fins. See engine manual for instructions.

CHECK MUFFLER

Check muffler for debris, cracks, wear, or other damage.

CAUTION: Replace worn-out mufflers immediately. Continued use could result in fire or explosion.

CAUTION: AVOID INJURY. Read and understand the entire *Safety* section before proceeding.

SERVICE POSITION

Put unit into service position for easy access to underneath the deck.

CAUTION: Avoid fuel spills. Follow steps below to help prevent fuel spills. If fuel leaks into air cleaner, replace air cleaner. ALWAYS clean up any spilled fuel.

1. Place unit on a flat, level surface.
2. Disconnect spark plug wire from spark plug.
3. Remove fuel cap, place a piece of plastic bag over the opening and tighten cap securely.
4. Tip unit *onto left side,* opposite the discharge opening.

   Make sure unit is secure and will not tip over.

IMPORTANT: Remove plastic from fuel cap after unit is upright and service is complete.

HANDLEBAR HEIGHT

To adjust (Figure 15):

1. Remove hardware from lower handlebar mounting hole.
2. Rotate the handlebar up or down to the desired height and align the mounting holes with the holes in the handlebar upright.
3. Secure the handlebars in position with hardware removed in step 1.

NOTE: To fold handlebars flat for storage, remove the hardware from the lower handlebar mounting holes, rotate the handlebars forward, and then replace the hardware in the holes on the handlebar upright.

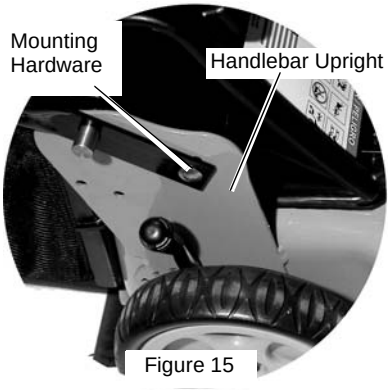
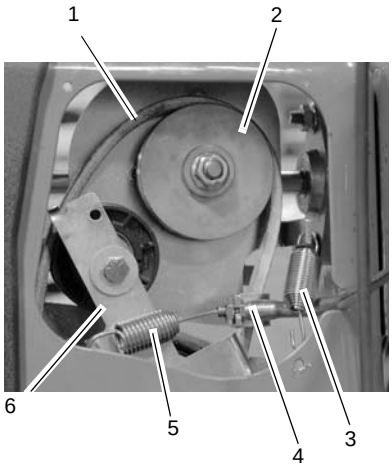


Figure 15

DRIVE BELT REPLACEMENT (self-propelled models)

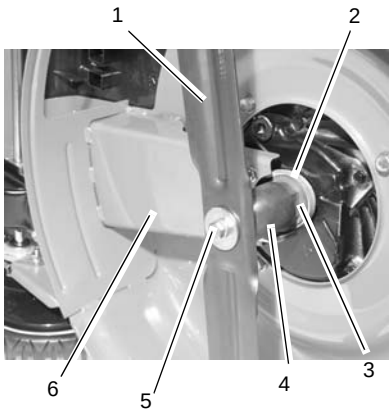
To Remove Drive Belt:

1. Disconnect spark plug wire from spark plug.
2. Remove transmission cover.
3. Disconnect idler return spring from idler arm. See Figure 16.
4. Disconnect the wheel drive cable from transmission mount, and then disconnect drive cable spring from idler arm.
5. Remove belt from transmission input pulley and transmission idlers, and then push the belt out through the belt channel.
6. Put the unit in the service position. See *SERVICE POSITION* on page 19.
7. Remove blade and blade adapter from the crank shaft.
8. Remove the belt from the engine pulley, and then pull the belt through the belt channel. See Figure 17.



1. Belt
2. Transmission Input Pulley
3. Idler Return Spring
4. Wheel Drive Cable
5. Drive Cable Spring
6. Idler Arm

Figure 16



1. Blade
2. Drive Belt
3. Engine Pulley
4. Blade Adapter
5. Bolt, Lock Washer & Flat Washer
6. Belt Channel

Figure 17

To Install The Drive Belt:

IMPORTANT: Be sure the belt seats in idler and pulley grooves with the idler touching the back (flat) side of belt.

1. Install the new belt on the transmission input pulley and idlers, route it through the belt channel, and then install the belt on the engine pulley. See Figure 18.

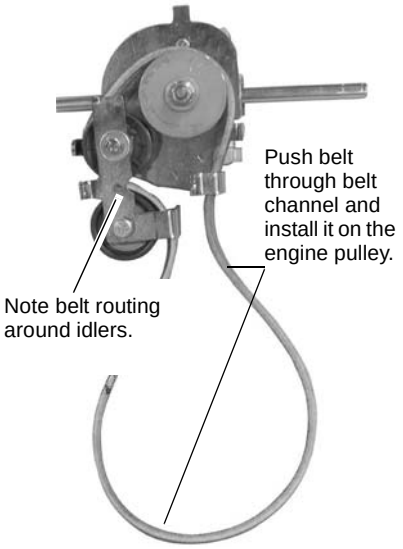


Figure 18

2. Connect the wheel drive cable spring to the idler arm as shown in Figure 19, and then connect the wheel drive cable to the transmission mount. See Figure 16.

Figure 19

3. Connect the idler return spring to the idler arm.

4. Install the blade adapter and blade on the crankshaft. Make sure the blade hardware is tightened to the proper torque. See *To install blade:* on page 17.
5. Replace the transmission cover.
6. Connect spark plug wire to the spark plug.

ENGINE/BLADE CONTROL ADJUSTMENT

NOTE: The engine/blade control has no user serviceable adjustments. If the engine/blade control does not stop the engine or blade within 3 seconds of releasing the control bail, take the unit to an authorized Ariens dealer for repairs.

BATTERY (electric start models)

WARNING: AVOID INJURY. Read and understand the entire *Safety* section before proceeding.

WARNING: Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

NOTE: Unit comes equipped with a maintenance-free battery that requires no regular maintenance except cleaning the terminals.

To Remove Battery from Unit

1. Disconnect negative (–) cable first, then positive (+) cable (Figure 20).
2. Remove battery cover and battery. Save mounting hardware for reinstallation.

To Replace Battery on Unit

1. Hold battery and battery cover in place against mower frame.
2. Secure with the hardware removed above.
3. Connect negative (–) cable first, then positive (+) cable (Figure 20).

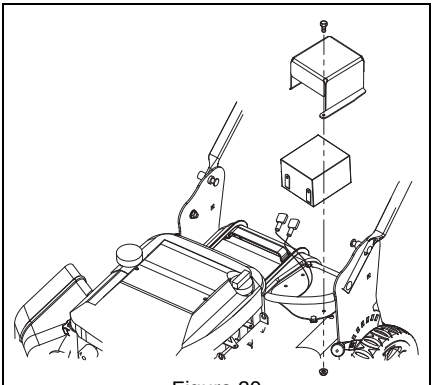


Figure 20

To Charge Battery

NOTE: Engine does not charge the battery. Battery will require periodic charging to ensure proper starting.

IMPORTANT: DO NOT attempt to “jump start” mower.

IMPORTANT: DO NOT start engine while the charger is connected to wiring harness.

1. Connect battery charger to the wiring harness. See Figure 21.
2. Plug charger into 110 volt Alternating Current (A.C.) outlet.

IMPORTANT: Battery charger supplied with unit is for *110 volt* Alternating Current (A.C.) outlets *only*.

3. Charge for 24 to 48 hours (battery may be charged for up to 52 hours without damaging it).

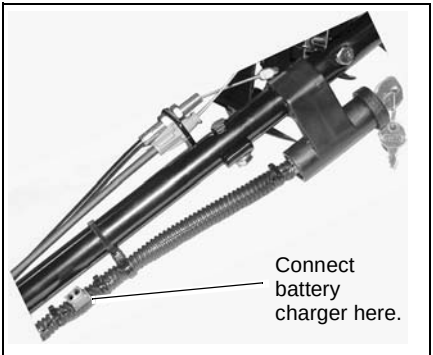


Figure 21

WHEEL DRIVE CONTROL ADJUSTMENT (self-propelled models)

See Figure 22.

NOTE: The unit should stop immediately when the wheel drive control is released, and the unit should not creep forward when the wheel drive control is disengaged with the engine running. The unit's forward speed should increase as the wheel drive control gets closer to the handlebar.

If the unit creeps, decrease traction and speed. If the unit does not accelerate smoothly or seems to slip under load, increase the traction and speed.

NOTE: Before adjusting the wheel drive cable, first make sure the area around the drive components is free of dirt or debris that could prevent the transmission from engaging or disengaging properly, and then make sure the return spring is connected properly to idler arm.

Adjust the wheel drive by adjusting the cable on the handlebar.

IMPORTANT: DO NOT adjust the cable so the transmission does not return to neutral and stop the unit when the control bail is released.

Check The Adjustment

1. Start the engine and slowly squeeze the wheel drive control against the handlebar and then release the wheel drive control.
2. The unit should move forward as you squeeze the wheel drive control and then stop immediately and not "creep" slowly forward when you release it.

To Adjust:

1. Move the wheel drive cable adjuster up or down the handlebar. See Figure 22.

   To increase traction and speed, move the cable adjuster down the handlebar.

   To decrease traction and speed, move the cable adjuster up the handlebar.
2. Check the adjustment and readjust as needed.

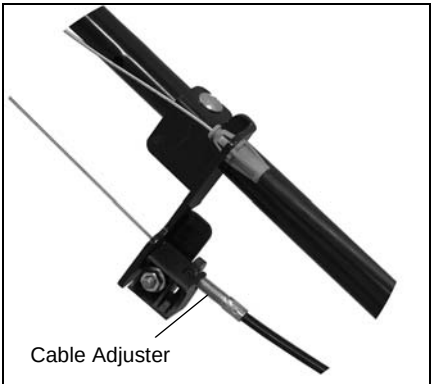


Figure 22

STORAGE

CAUTION: AVOID INJURY. Read and understand the entire *Safety* section before proceeding.

IMPORTANT: NEVER spray unit with high-pressure water or store unit outdoors. Store mower in a cool, dry, protected location.

Cleaning

Allow unit to cool. Clean unit thoroughly with mild soap and low pressure water. Brush off dirt and debris from all surfaces. Touch up all scratched surfaces to prevent rust. Matching touch-up paint is available from your Ariens Dealer. Do not use abrasives, solvents, or harsh cleaners.

Inspection

Inspect mower and repair or replace worn or damaged parts to avoid delays when beginning use again.

Regularly check all hardware and keep fasteners tight. Know unit is in safe working condition.

Grass Bag

Wash out grass bag and allow to dry before storage. Grass bag may be stored in position on mower.

Engine

When storing unit for extended periods of time, remove all fuel from tank and carburetor (run dry). Refer to engine manual.

Fuel System

Gasoline left in the fuel system for extended periods without a stabilizer will deteriorate, resulting in gum deposits in the system. These deposits can damage the carburetor and the fuel hoses, filter and tank. Prevent deposits from forming in the fuel system during storage by adding a quality fuel stabilizer to the fuel. Follow the recommended mix ratio found on the fuel stabilizer container.

To treat the fuel system for storage:

1. Add fuel stabilizer according to manufacturer's instructions.
2. Run engine for at least 10 minutes after adding stabilizer to allow it to reach the carburetor.

NEVER store the engine with fuel in the fuel tank inside of a building with potential sources of ignition.

TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	CORRECTION
Engine will not start	1. Fuel tank empty or low. 2. Spark plug wire loose or off. 3. Engine/Blade control cable detached, broken, or not adjusted properly.	1. Check fuel level. Fill tank if necessary. 2. Check connection. 3. Check cable. Adjust, repair or replace as necessary.
Engine is difficult to restart	1. Mower clogged with grass.	1. Clear clippings from under mower. (Allow the mower to clear clippings before shutting off engine.)
Cut is poor	1. Worn blade. 2. Too much grass is being removed per cutting. 3. Grass is too wet. 4. Mowing speed is too fast.	1. Check blade (see *CHECK MOWER BLADE* on page 17). 2. Raise cutting height. 3. Allow grass to dry. 4. Mow slower.
Grass does not disperse evenly	1. Too much grass is being removed per cutting. 2. Grass is too wet. 3. Mowing speed is too fast.	1. Raise cutting height. 2. Allow grass to dry. 3. Mow slower.
Mower does not bag clippings	1. Grass bag is overfilled. 2. Mulching plug is installed.	1. Empty grass bag and do not allow it to overfill. 2. Remove mulching plug.

PROBLEM	PROBABLE CAUSE	CORRECTION
Wheel drive does not engage (Self-Propelled models)	1. Wheel drive control not engaged. 2. Drive belt out of position. 3. Drive belt worn or damaged. 4. Wheel drive control cable detached or broken. 5. Bearings damaged. 6. Debris in gear set. 7. Drive seems to slip or speed is too slow.	1. Engage wheel drive control. 2. Check drive belt. Adjust as necessary (see *CHECK DRIVE BELT (self-propelled models)* on page 18). 3. Replace belt (see *CHECK DRIVE BELT (self-propelled models)* on page 18). 4. Check wheel drive control cable. Adjust or replace as needed. See *CHECK WHEEL DRIVE CONTROL (self-propelled models)* on page 17. 5. Contact your Dealer. 6. Contact your Dealer. 7. See *WHEEL DRIVE CONTROL ADJUSTMENT (self-propelled models)* on page 22.

SERVICE PARTS

Always use genuine Ariens parts to keep your mower running like new.

Description	Part Number
Air Filter	21543500
Spark Plug	21543600
Blade	01252100
High Lift Blade	01246000
Drive Belt	07200505
Battery	01178400
Charger	01281100

ACCESSORIES

See your authorized Ariens Dealer to add these optional accessories.

71105500	WBLM Bagger Kit (Ariens)
71105800	Cutting Height Extension Kit

SPECIFICATIONS			
Model Number	**911150**	**911152**	**911156**
Description	**BR21P**	**BR21SP**	**BR21SPE**
Length - in. (cm)	70 (177.8)		
Height - in. (cm)	47 (119.4)		
Width - in. (cm)	21.5 (54.6)		
Actual Weight - lbs (kg)	69 (31.3)	83 (37.6)	87 (39.5)
Cutting Width- in. (cm)	21 (53.3)	21 (53.3)	21 (53.3)
Cutting Height - in. (cm)	1 – 4 (2.5 – 10.4)	1 – 4 (2.5 – 10.4)	1 – 4 (2.5 – 10.4)
Engine, 4 cycle	Kohler	Kohler	Kohler
Model	XT-7	XT-7	XT-7
Max Rotation Speed of Cutting Edge - RPM (min^{-1})	3,200		
Governed RPM (May be different from maximum rpm.)	3,100 ± 100	3,100 ± 100	3,100 ± 100
Displacement Cu. In. (cc)	12 (197)	12 (197)	12 (197)
Cylinder Bore	Cast Iron	Cast Iron	Cast Iron
Engine Oil Type	See engine manual.		
Crank Case Capacity - Oz. (Liter)	20 (0.59)	20 (0.59)	20 (0.59)
Oil System	Splash	Splash	Splash
Engine Oil Filter	N/A	N/A	N/A
Spark Plug Gap - in. (mm)	See engine manual.		
Fuel Type	Unleaded	Unleaded	Unleaded
Fuel Tank Capacity - qt (Liter)	1.6 (1.5)	1.6 (1.5)	1.6 (1.5)
Primer Bulb	Standard	Standard	Standard
Throttle	N/A	N/A	N/A
Air Cleaner	Paper Element	Paper Element	Paper Element
Starting	Recoil	Recoil	Electric/Recoil
Variable Speeds - MPH (km/hr)	N/A	0 – 4 (0 – 6.4)	0 – 4 (0 – 6.4)
Mower Deck	14 Gauge - Stamped Steel		
Front Wheel Dia - in. (cm)	8.5 (21.6)	8.5 (21.6)	8.5 (21.6)
Rear Wheel Dia - in. (cm)	8.5 (21.6)	8.5 (21.6)	8.5 (21.6)

Two-Year Limited Lawn and Garden Walk Behind Warranty

This warranty statement applies only to 21-Inch Walk Behind Lawn Mowers, Wide Area Walks, Super Striper Mowers, Tillers, String Trimmers, Log Splitters, Edgers and Power Brushes

Ariens Company (Ariens) warrants to the **original purchaser** that Ariens and Gravely brand consumer products manufactured and sold by Ariens after December 31, 2007 will be free from defects in material and workmanship for a period of two years after the date of purchase. An authorized Ariens dealer (Ariens brand products) or Gravely dealer (Gravely brand products) will repair any defect in material or workmanship, and repair or replace any defective part, subject to the conditions, limitations and exclusions set forth herein. Such repair or replacement will be free of charge (labor and parts) to the original purchaser except as noted below.

One-Year Limited Warranty on Professional/Commercial 21-inch Walk-Behind Lawn Mowers

21-inch walk-behind lawn mowers labeled or designated by Ariens as a Professional/Commercial product put to any business use, agricultural, commercial, or industrial, are warranted to the **original purchaser** to be free from defects in material and workmanship for a period of one year after the date of purchase.

90-Day Limited Warranty on Service Parts and Accessories

Genuine Ariens or Gravely brand service parts and accessories are warranted to be free from defects in material and workmanship for a period of 90 days after the date of purchase. An authorized Ariens or Gravely dealer will repair or replace any such part or accessory free of charge, except for labor, during that period.

Except for 21-inch walk-behind lawn mowers labeled or designated by Ariens as a Professional/Commercial product, the duration of all warranties herein applies only if the product is put to personal use around a household or residence. If the product is put to any business use, agricultural, commercial, or industrial, then the duration of these warranties shall be 90 days after the date of purchase. If any product is rented or leased, then the duration of these warranties shall be 90 days after the date of purchase.

Exceptions, Limitations, Exclusions

Customer Responsibilities

Register the product immediately at the time of sale. If the dealer does not register the product, the customer must complete the product registration card in the literature package and return it to the Ariens Company, or register the unit online at www.ariens.com or www.gravely.com.

To obtain warranty service, the **original purchaser** must:

- Perform the maintenance and minor adjustments explained in the owner's manual.
- Promptly notify Ariens or an authorized Ariens or Gravely service representative of the need for warranty service.
- Transport the product to and from the place of warranty service.
- Have the warranty service performed by an authorized Ariens or Gravely service representative.

To find an Ariens or Gravely authorized service representative, contact Ariens at:

655 W. Ryan Street
Brillion, WI 54110
(920) 756 - 2141
www.ariens.com
www.gravely.com

Exceptions and Limitations

- Batteries are warranted only for a period of 12 months after date of purchase, on a prorated basis. For the first 90 days of the warranty period, a defective battery will be replaced free of charge. If the applicable warranty period is more than 90 days, Ariens will cover the prorated cost of any defective battery, for up to 12 months after the date of purchase.

Exclusions – Items Not Covered by This Warranty

- Engines and engine accessories are covered only by the engine manufacturer's warranty and are not covered by this warranty.
- Parts that are not genuine Ariens or Gravely service parts are not covered by this warranty.
- The following maintenance, service and replacement items are not covered by this warranty unless they are noted in the Limitations section above: lubricants, spark plugs, oil, oil filters, air filters, fuel filters, brake linings, brake arms, shoes, runners, scraper blades, shear bolts, mower blades, mower vanes, tines, brushes, headlights, light bulbs, knives, cutters.
- Any misuse, alteration, improper assembly, improper adjustment, neglect, or accident which requires repair is not covered by this warranty.
- This warranty applies only to products purchased in the United States (including Puerto Rico) and Canada. In all other countries, contact place of purchase for warranty information.

Disclaimer

Ariens may from time to time change the design of its products. Nothing contained in this warranty shall be construed as obligating Ariens to incorporate such design changes into previously manufactured products, nor shall such changes be construed as an admission that previous designs were defective.

LIMITATION OF REMEDY AND DAMAGES

Ariens Company's liability under this warranty, and under any implied warranty that may exist, is limited to repair of any defect in workmanship, and repair or replacement of any defective part. Ariens shall not be liable for incidental, special, or consequential damages (including lost profits). Some states do not allow the exclusion of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

DISCLAIMER OF FURTHER WARRANTY

Ariens Company makes no warranty, express or implied, other than what is expressly made in this warranty. If the law of your state provides that an implied warranty of merchantability, or an implied warranty of fitness for particular purpose, or any other implied warranty, applies to Ariens Company, then any such implied warranty is limited to the duration of this warranty. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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⚠ WARNING ⚠

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.